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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/757,760	01/14/2004	Thomas N. Chalin	WCMI-0039	4245

20558 7590 06/02/2006

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EXAMINER	
SLITERIS, JOSELYNN Y	

ART UNIT	PAPER NUMBER
3616	

DATE MAILED: 06/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/757,760	CHALIN ET AL.	
	Examiner	Art Unit	
	Joselynn Y. Sliteris	3616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 April 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-46* is/are pending in the application.

4a) Of the above claim(s) *9,10,12,18,19,22-24,33-36,38,40,41,45 and 46* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5,8,11,20,25-31,39 and 42-44* is/are rejected.

7)☒ Claim(s) *6,7,13-17,21,32 and 37* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *01142004; 03032004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election of the species representatively illustrated in Figs. 1 & 2 in the reply filed on 4/3/06 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

2. Applicant notes that claims 1-8, 11-17, 20, 21, 25-32, 37, 39, and 42-44 are allegedly drawn to the elected species as illustrated in Figs. 1 & 2. However, examiner disagrees and notes that claim 12 is not drawn to the elected species of Figs. 1 & 2. Therefore, claims 9, 10, 12, 18, 19, 22-24, 33-36, 38, 40, 41, 45, and 46 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 4/3/06.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-5, 8, 11, 20, 27, 28, and 44 are rejected under 35 U.S.C. 102(b) as being anticipated by Ferris (U.S. Patent 4,079,798).

5. Regarding claim 1, Ferris discloses a liftable suspension system U as in the present invention, comprising:

first and second wheel spindles 25a, 25a (Fig. 3) positioned to extend outwardly at each respective lateral side of the vehicle C, the first and second spindles being displaceable independent of each other (abstract); and

an actuator 30 operable to raise at least the first spindle 25a, so that a tire 25 rotatably connected to the first spindle is liftable out of engagement with a road surface when the actuator raises the first spindle (Figs. 1-3).

6. Regarding claims 2-5, 8, 11, 20, Ferris discloses the suspension system U as in the present invention, wherein:

each of the first and second spindles 25a, 25a is rotatable;

each of the first and second spindles is rotatably connected to a respective one of first and second support devices 24, 24;

the first and second devices 24, 24 are independently displaceable relative to each other (abstract);

each of the first and second devices 24, 24 is pivotably connected to a frame 11a, 11b of the vehicle C when the suspension system is attached to the vehicle;

the actuator 30 is connected to the first device 24, so that the actuator 30 applies an upwardly biasing force to the first device when the actuator raises the first spindle;

each of the first and second devices 24, 24 is pivotably connected to a respective one of first and second arms 26, 26, each of the first and second arms being configured for pivotable connection to a frame 11a, 11b of the vehicle C;

the actuator 30 applies a force to the first arm 26 to thereby pivot the first arm relative to the first device when the first spindle is raised.

7. Regarding claim 27, Ferris discloses a liftable suspension system U as in the present invention, comprising:

first and second wheel spindles 25a, 25a (Fig. 3);

first and second support devices 24, 24, each of the first and second spindles extending outwardly relative to a respective one of the first and second support devices;

first and second arms 26, 26, each of the first and second support devices being pivotably connected to a respective one of the first and second arms, and each of the first and second arms being configured for pivotable connection to a frame 11a, 11b of the vehicle C; and

an actuator 30 operative to lift at least the first support device relative to the vehicle frame when the suspension system is attached to the frame,

and wherein the first and second support devices are displaceable relative to the vehicle frame independently of each other when the suspension system is attached to the frame (abstract).

8. Regarding claims 28 and 44, Ferris discloses the suspension system as in the present invention, wherein:

each of the first and second spindles 25a, 25a is rotatable relative to the respective one of the first and second devices 24, 24;

the actuator 30 is connected to the first device 24, so that the actuator 30 applies an upwardly biasing force to the first device to thereby lift the first device.

9. Claims 27-30, 39, and 44 are rejected under 35 U.S.C. 102(b) as being anticipated by Burke (WO 02/26544), as cited by applicant.

10. Regarding claim 27, Burke discloses a liftable suspension system 700, 1000 (see annotated Figs. 7-10 attached) as in the present invention, comprising:

first and second wheel spindles;

first and second support devices, each of the first and second spindles extending outwardly relative to a respective one of the first and second support devices (Figs. 7, 8);

first and second arms (Fig. 10), each of the first and second support devices being pivotably connected to a respective one of the first and second arms, and each of the first and second arms being configured for pivotable connection to a frame of the vehicle; and

an actuator 704, 804, 1002 operative to lift at least the first support device relative to the vehicle frame when the suspension system is attached to the frame,

and wherein the first and second support devices are displaceable relative to the vehicle frame independently of each other when the suspension system is attached to the frame (abstract).

11. Regarding claims 28-30, 39, and 44, Burke discloses the suspension system as in the present invention, wherein:

each of the first and second spindles is rotatable relative to the respective one of the first and second devices;

each of the first and second devices has a respective one of first and second king pins secured thereto, and wherein each of the first and second spindles is pivotably connected to a respective one of the first and second king pins (Figs. 13A, 13B);

the suspension system is steerable by rotating the first and second spindles (Figs. 13A, 13B);

each of the first and second arms is part of a parallel link-type suspension (Fig. 10);

the actuator 704, 804, 1002 is connected to the first device, so that the actuator 704, 804, 1002 applies an upwardly biasing force to the first device to thereby lift the first device.

12. Claims 27-30, 39, and 44 are rejected under 35 U.S.C. 102(b) as being anticipated by Meritor product brochure, "Premium RideStar Suspension Systems", as cited by applicant.

13. Regarding claim 27, Meritor discloses a liftable suspension system (all drawings, especially the drawing labeled "RIS18 Independent Front Suspension" & "C Type-Heavy"), as in the present invention, comprising:

first and second wheel spindles;

first and second support devices, each of the first and second spindles extending outwardly relative to a respective one of the first and second support devices;

first and second arms, each of the first and second support devices being

pivotably connected to a respective one of the first and second arms, and each of the first and second arms being configured for pivotable connection to a frame of the vehicle; and

an actuator operative to lift at least the first support device relative to the vehicle frame when the suspension system is attached to the frame,

and wherein the first and second support devices are displaceable relative to the vehicle frame independently of each other when the suspension system is attached to the frame.

14. Regarding claims 28-30, 39, and 44, Meritor discloses the suspension system as in the present invention, wherein:

each of the first and second spindles is rotatable relative to the respective one of the first and second devices;

each of the first and second devices has a respective one of first and second king pins secured thereto, and wherein each of the first and second spindles is pivotably connected to a respective one of the first and second king pins;

the suspension system is steerable by rotating the first and second spindles;

each of the first and second arms is part of a parallel link-type suspension;

the actuator is connected to the first device, so that the actuator applies an upwardly biasing force to the first device to thereby lift the first device (see annotated drawing attached).

Claim Rejections - 35 USC § 103

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

16. Claims 30 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ferris (U.S. Patent 4,079,798) in view of Christenson et al. (U.S. Patent 5,597,174).

17. Regarding claims 30 and 31, Ferris discloses the claimed invention except for the suspension system being steerable by rotating the first and second spindles. Christenson discloses that it is known in the art to provide a suspension system steerable by rotating the first and second spindles (Fig. 14), wherein a tie rod 112 connected between the first and second spindles forces the first and second spindles to rotate together. It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the suspension system of Ferris with the tie rod of Christenson, in order to provide steerability.

18. Claims 25, 26, 42, and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ferris (U.S. Patent 4,079,798).

19. Regarding claims 25, 26, 42, and 43, Ferris discloses the claimed invention except for at least one of the first and second arms being made of a composite material, wherein the composite material is a resin-impregnated fabric. It would have been obvious to one having ordinary skill in the art at the time the invention was made to

make at least one of the first and second arms of a composite material, wherein the composite material is a resin-impregnated fabric, since a composite material is lightweight thus contributing to the vehicle's increased fuel economy and greatly reducing wear and tear on roadways, and since it since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

20. Claims 42 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burke (WO 02/26544), as cited by applicant.

21. Regarding claims 42 and 43, Burke discloses the claimed invention except for at least one of the first and second arms being made of a composite material, wherein the composite material is a resin-impregnated fabric. It would have been obvious to one having ordinary skill in the art at the time the invention was made to make at least one of the first and second arms of a composite material, wherein the composite material is a resin-impregnated fabric, since a composite material is lightweight thus contributing to the vehicle's increased fuel economy and greatly reducing wear and tear on roadways, and since it since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

22. Claims 42 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meritor product brochure, "Premium RideStar Suspension Systems", as cited by applicant.

23. Regarding claims 42 and 43, Meritor discloses the claimed invention except for at least one of the first and second arms being made of a composite material, wherein the composite material is a resin-impregnated fabric. It would have been obvious to one having ordinary skill in the art at the time the invention was made to make at least one of the first and second arms of a composite material, wherein the composite material is a resin-impregnated fabric, since a composite material is lightweight thus contributing to the vehicle's increased fuel economy and greatly reducing wear and tear on roadways, and since it since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

Allowable Subject Matter

24. Claims 6, 7, 13-17, 21, 32, and 37 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

25. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

26. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joselynn Y. Sliteris whose telephone number is 571-

272-6675. The examiner can normally be reached on Mon, Thurs & Fri 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul N. Dickson can be reached on 571-272-6669. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Joselynn Y. Sliteris 5/30/06
Patent Examiner
Art Unit 3616

JYS
5/30/06

5/30/06
PAUL N. DICKSON
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600

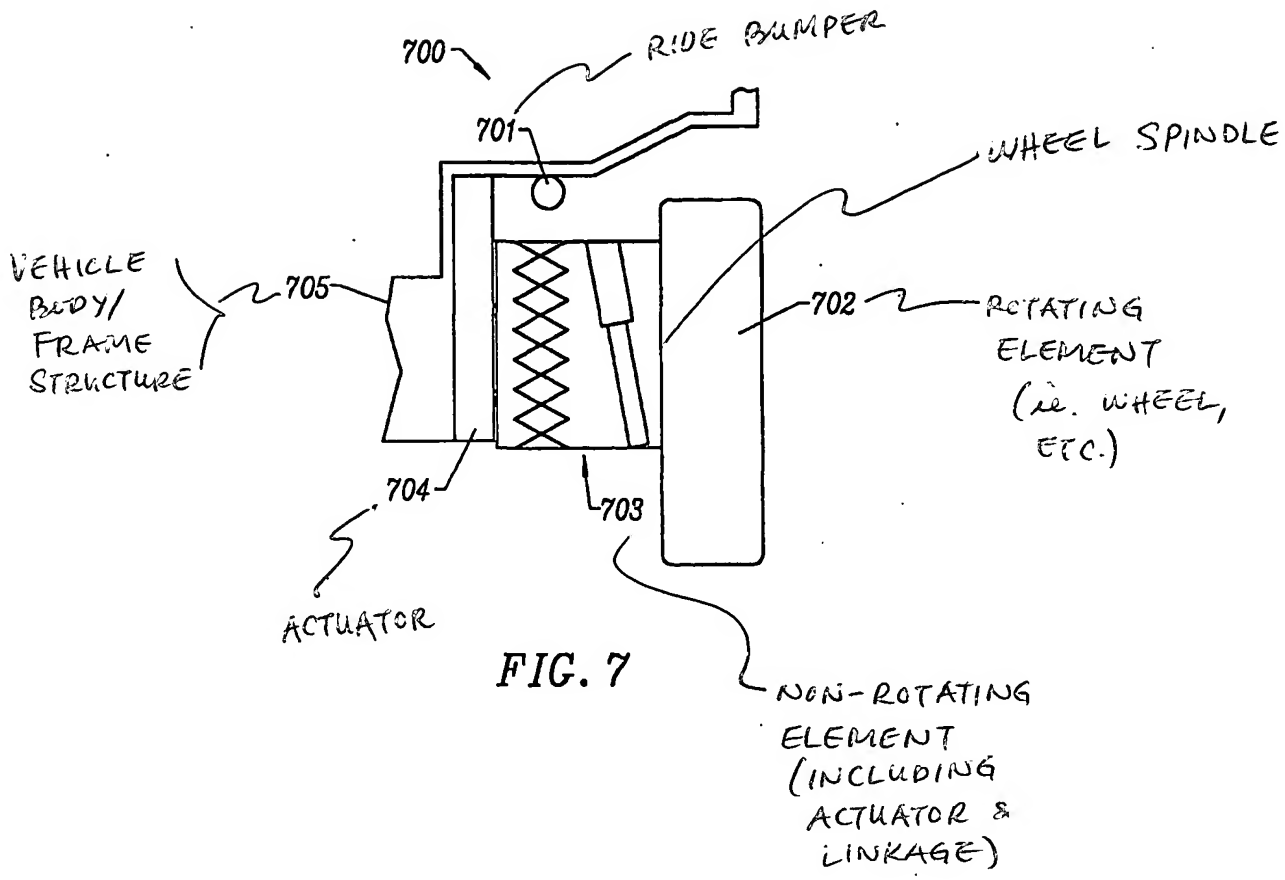
700
RIDE BUMPER
701
WHEEL SPINDLE
VEHICLE BODY/ FRAME STRUCTURE
705
702
ROTATING ELEMENT (ie. WHEEL, ETC.)
704
703
ACTUATOR
NON-ROTATING ELEMENT (INCLUDING ACTUATOR & LINKAGE)

FIG. 7

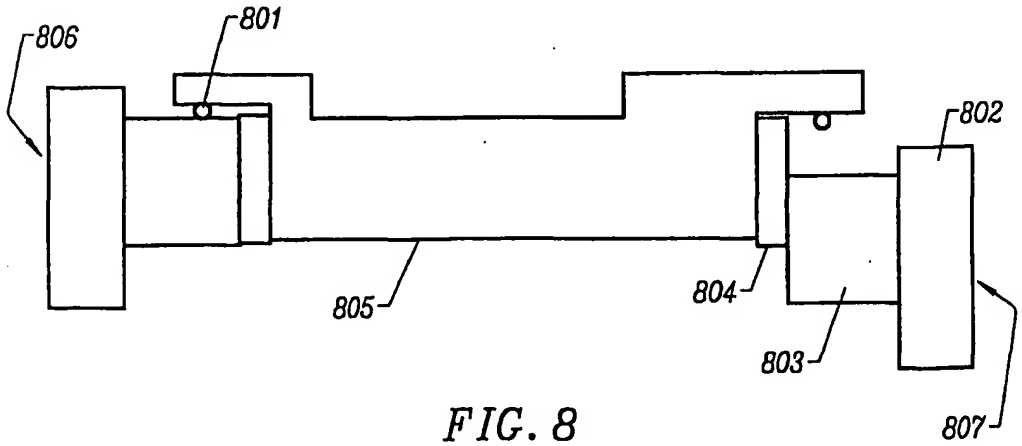
806
801
802
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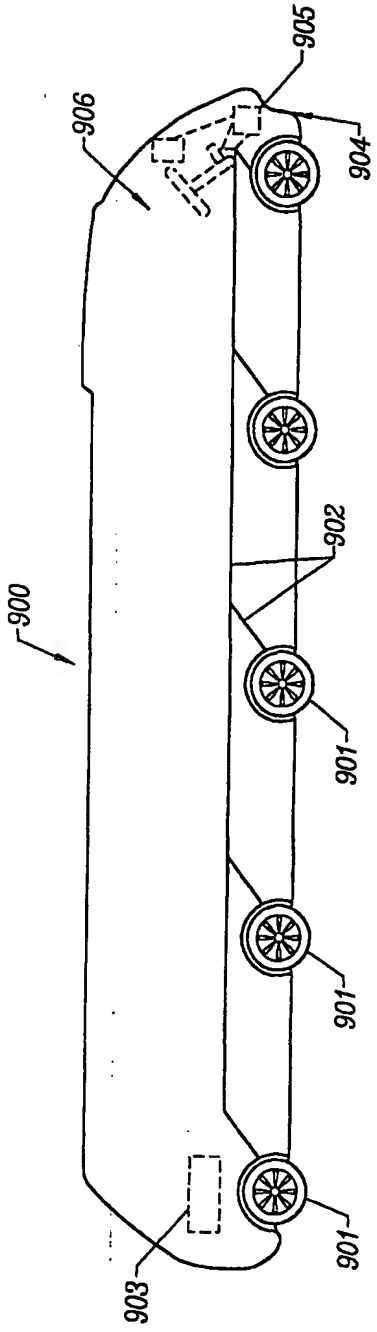
FIG. 8


900
901
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904
905
906

FIG. 9

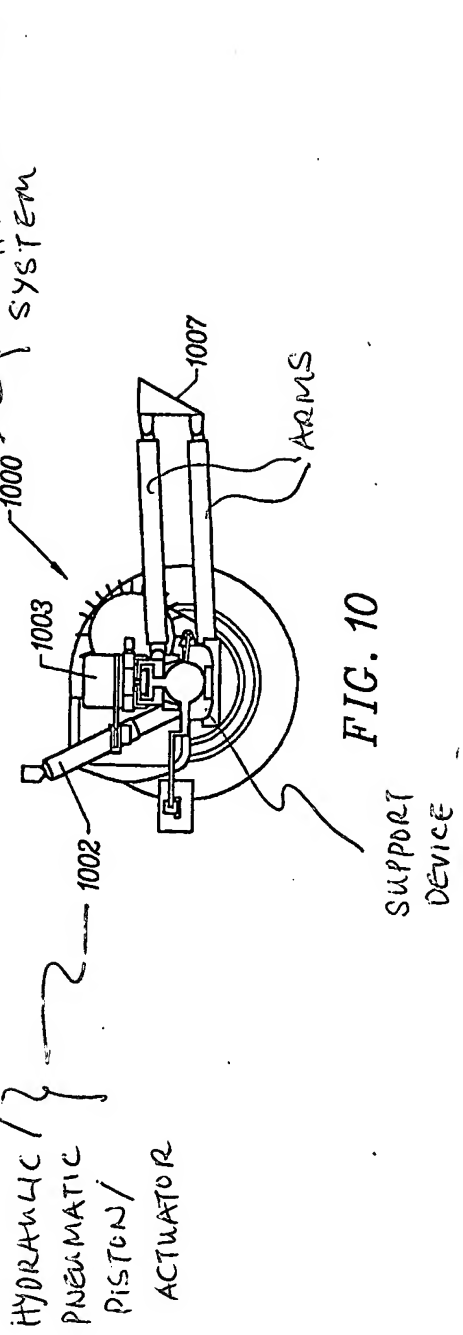
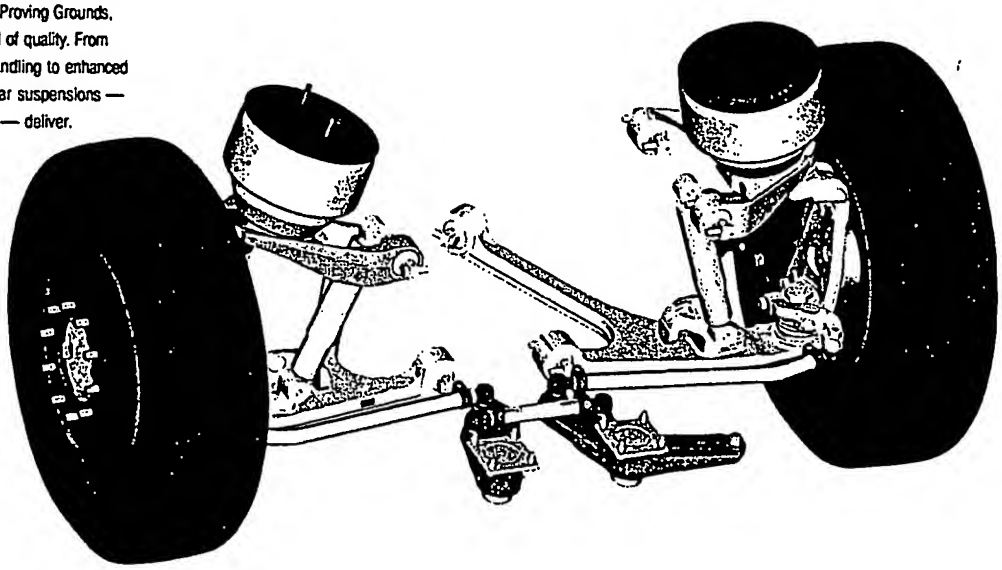

HEIGHT ADJUSTER SYSTEM
1000
1002
1003
1007
ARMS
HYDRAULIC / PNEUMATIC PISTON / ACTUATOR
SUPPORT DEVICE

FIG. 10

RideStar™ front and rear suspension systems tuned for transit bus applications

RIS18 Independent Front Suspension
RideStar dual wishbone suspensions have endured rigorous testing at the Bosch Proving Grounds, ensuring an unparalleled level of quality. From smooth ride and excellent handling to enhanced control characteristics, RideStar suspensions — and the people behind them — deliver.



Partnerships in Excellence

When premier manufacturers look for the right suppliers to provide the components and modules that will be used in their products, they seek out only those who have earned trust and respect through years of manufacturing excellence. Similarly, when ArvinMeritor looks for OEM partners to utilize our design, engineering and production capabilities, we search for those whose reputation for quality and leadership are in harmony with our tradition. It only seems natural, then, that when our customers need the best suspension system available for a premium vehicle, they turn to our RideStar line.

The Best Products, Front to Rear

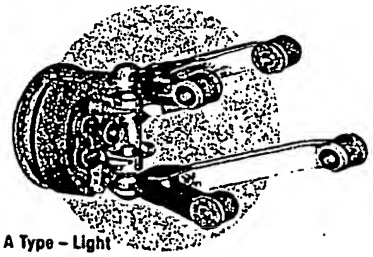
At ArvinMeritor, we know you demand the most from your vehicle. That's why our double-wishbone independent front suspensions and innovative air spring rear suspensions are engineered to deliver in the areas that matter most.

Innovative Front Suspension Systems

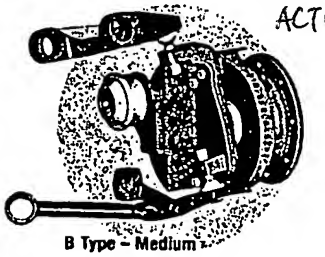
ArvinMeritor's close collaboration with Streparava, a leading European manufacturer of independent suspension systems, allows us to customize systems for the transit bus market. This creates improved comfort, better ride and handling characteristics, and increased durability.

The systems feature low unsprung weights, improving the ride, and enhancing tire adhesion and allowing for adjustment of dynamic characteristics.

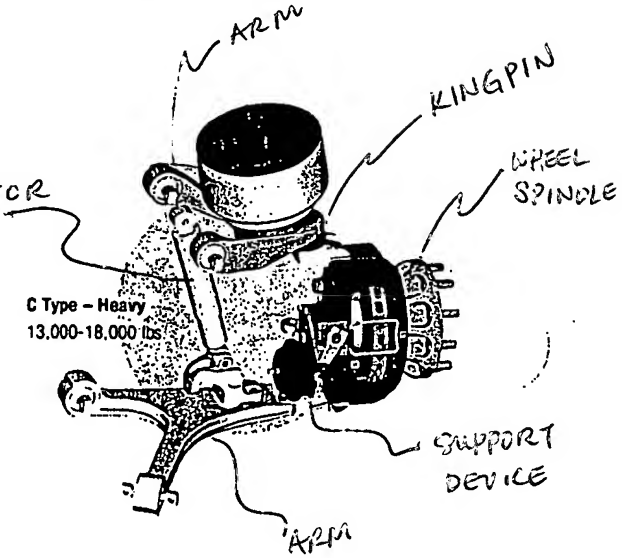
Our independent front suspension system with wide bellow spacing enhances stability, while our innovative system designs eliminate undesirable bump steer and reduce vibration. A wider steering angle, better control when braking, and ArvinMeritor products like DX225-21 disc brakes and Gabriel Shock Absorbers — included as standard equipment — also are advantages you will appreciate.



A Type – Light
6,000-9,000 lbs.



B Type – Medium
9,000-14,600 lbs.



C Type – Heavy
13,000-18,000 lbs.